RADIATOR DIMENSIONS

Current regulations must be complied with when calculating the thermal power of radiators for installation. When determining the number of elements in a radiator, remember that the nominal thermal power refers to a ΔT – the difference between the average water temperature and the room temperature – of 50K. Therefore, in order to save energy and improve environmental comfort, it is advisable to use for the system a design ΔT of less than 50K, (e.g. 30K÷40K) and decrease the water delivery temperature. The thermal power of radiators for values other than ΔT is obtained by multiplying the rated thermal power by a coefficient C calculated from the formula:

C=(ΔT / 50 K)n

where n is the exponent of the equation ***Q=B ΔTn***

which expresses the thermal power of the heating element and is shown in the table for the various models. This gives

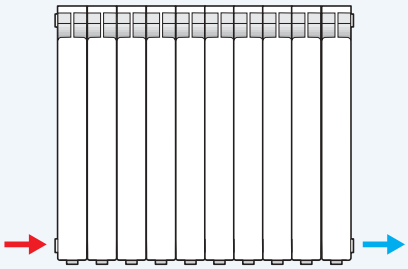
Q(ΔT)=Q(50 K) x C

for automatic calculation go to Calculate ΔT

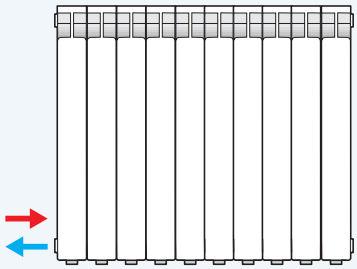
When determining the number of elements, remember that in installations in which the water enters and leaves from the bottom or with a single- or double-pipe valve, the thermal power may drop to 10-12% ***(fig. A)*** *and 20%, respectively* ***(fig. B)****, due to the particular water distribution inside the radiator. For radiators installed below shelves, in alcoves or – worse still – when using radiator covers – the thermal power may drop to 10-12%* ***(fig. C)****.*

for the first approximation go to Heating requirements calculation

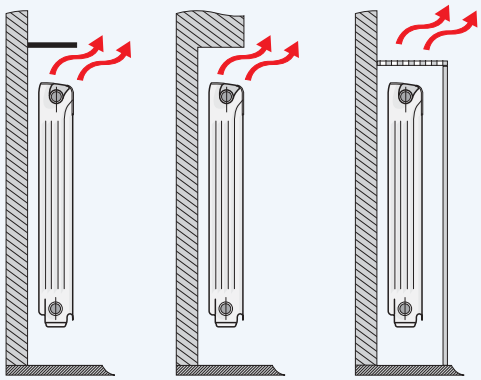
(fig. A)



(fig. B)



(fig. C)



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